796.

SUPREME COURT OF THE UNITED STATES.

No. 153.

FRANCIS O. J. SMITH, PLAINTIFF,

vs.

HERMAN B. ELY ET AL.

ON A CERTIFICATE OF DIVISION IN OPINION BETWEEN THE JUDGES OF THE CIRCUIT COURT, U. S., FOR THE DISTRICT OF OHIO.

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Gideon & Co., print.

THE UNITED STATES OF AMERICA,
District of Ohio, ss:

At a circuit court of the United States, within and for the seventh circuit and district of Ohio, began and held at the city of Columbus, in said district, on the third Tuesday in the month of October, being the fifteenth day of that month, in the year of our Lord one thousand eight hundred and fifty, and of the independence of the United States of America the seventy-fifth.

Present, the honorable John McLean and the honorable Humphrey H. Leavitt, judges of said court.

Among other proceeding had were the following, to wit:

FRANCIS O. J. SMITH, plff.,
vs.
HEMAN B. ELY et al., defts. } In case.

Be it remembered, that heretofore, to wit, on the ninth day of September, in the year of our Lord one thousand eight hundred and forty-eight, came the said plaintiff, by his attorneys, and sued out of the clerk's office of said court a certain writ of summons ad respondendum against the said defendants, in the words and figures following, to wit:

UNITED STATES OF AMERICA,
District of Ohio, ss:

To the marshal of said district, greeting:

We command you to summon Heman B. Ely, Henry O'Reilly, Robert W. McCoy, Thomas Moodie, Michael B. Bateham, Lincoln Goodale, Wray Thomas, Albert B. Buttles, and Robert Neil, citizens of, and residents in, the State of Ohio, if they be found in your bailiwick, to be and appear before the judges of the circuit court of the United States, for the district of Ohio aforesaid, at Columbus, on the second Monday in the month of November next, to answer unto Francis O. J. Smith, citizen of, and resident in, the State of Maine, of a plea of trespass on the case, damages ten thousand (10,000) dollars; and of this writ make legal service and due return, on the 14th day of September instant, and have then and there this writ.

Witness the honorable R. B. Taney, chief justice of the United States, this 9th day of September, 1848, and in the 73d year of the independence of the United States of America.
[SEAL.]
Attest: WM. MINOR, *Clerk*.

On which said writ are the following endorsements, to wit:
"Suit brought for violation of the plaintiff's right as assignee of a

THE UNITED STATES OF AMERICA,
District of Ohio, ss:

At a circuit court of the United States, within and for the seventh circuit and district of Ohio, began and held at the city of Columbus, in said district, on the third Tuesday in the month of October, being the fifteenth day of that month, in the year of our Lord one thousand eight hundred and fifty, and of the independence of the United States of America the seventy-fifth.

Present, the honorable John McLean and the honorable Humphrey H. Leavitt, judges of said court.

Among other proceeding had were the following, to wit:

FRANCIS O. J. SMITH, plff.,
vs.
HEMAN B. ELY et al., defts. } In case.

Be it remembered, that heretofore, to wit, on the ninth day of September, in the year of our Lord one thousand eight hundred and forty-eight, came the said plaintiff, by his attorneys, and sued out of the clerk's office of said court a certain writ of summons ad respondendum against the said defendants, in the words and figures following, to wit:

UNITED STATES OF AMERICA,
District of Ohio, ss:

To the marshal of said district, greeting:

We command you to summon Heman B. Ely, Henry O'Reilly, Robert W. McCoy, Thomas Moodie, Michael B. Bateham, Lincoln Goodale, Wray Thomas, Albert B. Buttles, and Robert Neil, citizens of, and residents in, the State of Ohio, if they be found in your bailiwick, to be and appear before the judges of the circuit court of the United States, for the district of Ohio aforesaid, at Columbus, on the second Monday in the month of November next, to answer unto Francis O. J. Smith, citizen of, and resident in, the State of Maine, of a plea of trespass on the case, damages ten thousand (10,000) dollars; and of this writ make legal service and due return, on the 14th day of September instant, and have then and there this writ.

Witness the honorable P[illegible]. Taney, chief justice of the United States, this 9th day of September, 1848, and in the 73*d* year of the independence of the United States of America.
[SEAL.]
Attest: WM. MINOR, *Clerk*.

On which said writ are the following endorsements, to wit:
"Suit brought [illegible] violation of the plaintiff's right as assignee of a

part of each of two patents, issued by the United States to Samuel F. B. Morse, one for a new and useful improvement in electro-magnetic telegraphs, dated June 13th, A. D. 1848, and one for the American Electro-magnetic Telegraph, dated January 15, 1846, which violation consists in making and using said inventions of said Morse upon and over the magnetic telegraph route from Wheeling, in the State of Virginia, to Cincinnati, in the State of Ohio, the plaintiff being the grantee of the exclusive right to said route.

"EWING & SWAN & ANDREWS,
"*Attys. for plff.*"

"I, Eliphalet Case, jr., acknowledge myself security for all costs for which the plaintiff may be liable in this cause.

"ELIPHALET CASE, Jr."

And afterwards, to wit, on the fourteenth day of September, in the year of our Lord eighteen hundred and forty-eight, the said defendants, by their attorneys, waived the service of process and acknowledged notice of this suit, by an endorsement to that effect, made by them on said writ, in the words and figures following, to wit:

"We waive service of process and acknowledge notice of this suit for the defendants within named, September 12th, 1848.

"GHOLSON & MINER,
"*Attys. for deft.*"

And afterwards, to wit, at rules of said court, held in the clerk's office thereof, for the month of October, in the year last aforesaid, came the said plaintiff, by his attorneys, and filed therein his declaration in this cause, in the words and figures following, to wit:

CIRCUIT COURT OF THE UNITED STATES,
District of Ohio, ss:

1st Monday of October, A. D. 1848.

Heman B. Ely, Henry O'Reilly, Robert W. McCoy, Thomas Moodie, Michael B. Bateham, Lincoln Goodale, Wray Thomas, Albert B. Buttles, and Robert Niel, were summoned to answer to Francis O. J. Smith, a citizen of, and resident in, the State of Maine, for one Samuel F. B. Morse, a citizen of, and resident in, the United States, was the original inventor of a new and useful machine for the conveyance of intelligence in the letters patent hereinafter mentioned and fully described, the same being a new and useful American electro-magnetic telegraph; and the said Samuel F. B. Morse being so as aforesaid the inventor thereof, and being also a citizen of the United States, on the 20th day of June, A. D. 1840, upon due application therefor, did obtain letters patent therefor, in due form of law, under the seal of the Patent office of the United States, signed by the Secretary of State, and countersigned by the Commissioner of Patents of the United

States, bearing date the day and year last aforesaid, whereby there was secured to him, his heirs, administrators, executors, or assigns, for the term of fourteen years from and after the date thereof, the full and exclusive right and liberty of making, using, and vending to others to be used, the said machine; which said patent, on account of a defective specification, was afterwards, to wit, on the 15th day of January, A. D. 1846, duly surrendered to the Commissioner of Patents; and thereupon, the said Samuel F. B. Morse, being so as aforesaid the inventor thereof, and being also a citizen of the United States, to wit, on the said 15th day of January, A. D. 1846, upon such surrender as aforesaid, obtained another patent for said invention in due form of law, under the seal of the Patent office of the United States, signed by the Secretary of State, and countersigned by the Commissioner of Patents of the United States, bearing date the day and year last aforesaid, whereby there was secured to him, his heirs, executors, administrators, or assigns, for the residue of the period then unexpired, for which said original patent was granted, to wit, for the term of fourteen years from and after the said 20th day of June, A. D. 1840, in accordance with a corrected description and specification duly filed by said patentee, the full and exclusive right and liberty of making, using, and vending to others to be used, the said machine; which last mentioned patent also was, afterwards, to wit, on the 13th day of June, A. D. 1848, on account of a defective specification, duly surrendered to the Commissioner of Patent; and thereupon the said Samuel F. B. Morse, being so as aforesaid the inventor thereof, and being also a citizen of the United States, to wit, on the 13th day of June, A. D. 1848, upon such surrender as aforesaid, obtained another patent for said invention in due form of law, under the seal of the Patent office of the United States, signed by the Secretary of State, and countersigned by the Commissioner of Patents of the United States, bearing date the day and year last aforesaid, whereby there was secured to him, his heirs, administrators, executors, or assigns, for the residue of the period then unexpired for which said original patent was granted, to wit, for the term of fourteen years from and after the said 20th day of June, A. D. 1840, in accordance with a corrected description and specification duly filed by said patentee, the full and exclusive right and liberty of making, using, and vending to others to be used, the said machine, as by said letters patent, in court to be produced, will fully appear; and the said plaintiff avers that, before that time, to wit, on the day of March, A. D. 1838, the said Samuel F. B. Morse, having thereupon filed a caveat, and evidence of his intention to secure his legal rights and property in said invention, in the office of the Commissioner of Patents, in the city of Washington, to the end of obtaining letters patent for said invention, thereafter, according to law, did sell and convey to the said plaintiff, his heirs and assigns, among other things, one undivided fourth part of his said invention, and of all his right and property therein, secured by said caveat or otherwise, that he then had, or might thereafter have, from any letters patent for the same granted

by the Government of the United States, and within the limits thereof. Which said assignment was duly recorded in the Patent office of the United States, afterwards, to wit, on the 27th day of December, A. D. 1843; whereby the said plaintiff became, and was, and now is, the owner of an undivided fourth part of said patent right and invention, patented as aforesaid to the said Morse. And the said plaintiff further avers, that afterwards, to wit, on the 5th day of September, A. D. 1844, the said Samuel F. B. Morse assigned and conveyed, among other things, to one Alfred Vail, his heirs and assigns, one undivided eighth part of his said invention, and all the right, title, and interest, which he, the said Morse, had in the said eighth part of said invention, as the same might be secured to him by letters patent which might thereafter be granted to him by the Government of the United States, and within the limits thereof; which said assignment by the said Morse to said Vail was duly recorded in the Patent office of the United States, afterwards, to wit, on the 5th day of September, A. D. 1844. And the said plaintiff further avers, that afterwards, to wit, on the 22d day of June, A. D. 1847, the said Samuel F. B. Morse and Alfred Vail, by Amos Kendall, their duly authorized attorney, did assign and convey to him, the said plaintiff, among other things, all the right, title, and claim, joint or several, then held by them, either as owner or assignees of said patent that had been previously issued to said Morse, and was then subsisting as aforesaid, or as party or parties to any contract or contracts relating thereto, theretofore entered into by them, or either of them, to use, upon and over the route from the town of Wheeling, in the State of Virginia, to the town of Cincinnati, in the State of Ohio, and between said towns, the said electro-magnetic telegraph, embraced in said assignment under the name of Morse's Electro-magnetic Telegraph; to have and to hold the same during the existence of all patents of the said Morse theretofore issued, pertaining thereto, and of all patents which might thereafter be obtained by them, or either of them, in renewal thereof, or auxiliary thereto; which said assignment to the plaintiff was, afterwards, to wit, on the 30th day of June, A. D. 1847, duly recorded in the Patent office of the United States. And the plaintiff further avers that, heretofore, to wit, on the 5th day of March, A. D. 1838, the said Samuel F. B. Morse did assign and convey to one Leonard D. Gale, among other things, one undivided sixteenth part of his invention, heretofore described, and also of all right, property, and interest, that he might thereafter acquire in the same, as well within as without the limits of the United States, by letters patent, or otherwise, excepting only in the Republic of Texas; which said assignment was, afterwards, to wit, on the 12th day of September, A. D. 1844, recorded in the Patent office of the United States. And said plaintiff avers that afterwards, to wit, on the 2d day of February, A. D. 1847, the said Leonard D. Gale did re-convey, assign, and set over, to the said Samuel F. B. Morse, among other things, all the right, property, and interest which he, the said Gale, then had by virtue of said assignment so made to him, in and to the said sixteenth

part of said invention so conveyed to him as aforesaid. And said plaintiff further avers that said assignment last mentioned was, afterwards, to wit, on the 2d day of February, A. D. 1847, duly recorded in the Patent office of the United States. And the said plaintiff further avers that heretofore, to wit, on the 21st day of December, A. D. 1846, the said Samuel F. B. Morse, Alfred Vail, and Leonard D. Gale, by Amos Kendall, their duly authorized attorney, together with the said Francis O. J. Smith, did assign and convey, by a certain deed of trust of the date last aforesaid, to one Eliphalet Case, jr., as and in the capacity of trustee only, as therein provided, among other things, the exclusive right of constructing for, and using upon and over the said route, from the town of Wheeling, in the State of Virginia, to the town of Cincinnati, in the State of Ohio, and between said towns, the said American Electro-magnetic Telegraph, embraced in said assignment under the name of Morse's Electro-magnetic Telegraph; which said assignment to the said Eliphalet Case, jr., was duly recorded in the Patent office of the United States, afterwards, to wit, on the 23d day of December, A. D. 1846. And the said plaintiff further avers, that afterwards, to wit, on the sixteenth day of January, A. D. 1847, the said Eliphalet Case, jr., by virtue of authority for that purpose in him vested by said deed of trust, as assignee, and conveying to him said right in trust as aforesaid, did, by a certain deed by him then executed, appoint, as additional trustees with himself, and each with equal power, privileges, and rights with himself in the premises, the following individuals, to wit, John C. Wright, Lewis Worthington, George S. Coe, and Abel C. Thomas; and did, by said deed, assign and convey, among other things, to said Wright, Worthington, Coe, and Thomas, such an interest in the property of said electro-magnetic telegraph, embraced in said deed under the name of Morse's Electro-magnetic Telegraph, so conveyed to him in trust by said deed first mentioned, as would make them, respectively, equal owners and joint holders with himself of the same, as and in the capacity of trustees only, as provided in said deed of trust assigning and conveying said right to said Eliphalet Case, jr., in trust as aforesaid. And the said plaintiff further avers, that afterwards, to wit, on the day of February, A. D. 1841, at the district of Ohio aforesaid, the said John C. Wright, Lewis Worthington, George S. Coe, Abel C. Thomas, and Eliphalet Case, jr., assigned and conveyed to the said plaintiff, among other things, all the right, title, and interest, in them vested, in and to the said electro-magnetic telegraph, by virtue of said deed of trust executed to the said Eliphalet Case, jr., and to the said Wright, Worthington, Coe, and Thomas as aforesaid, and said trusts were then and there wholly cancelled and terminated; and said plaintiff avers, that afterwards, to wit, on the day of March, A. D. 1841, said assignment last mentioned was duly recorded in the Patent office of the United States; and said plaintiff further avers, that by said assignments and conveyance to him above mentioned he became and was the owner of the exclusive right to use the said machine within and throughout a specified part of the United States, to wit, upon and

over said route, from the town of Wheeling, in the State of Virginia, to the town of Cincinnati, in the State of Ohio, and between said towns, to wit, at said district of Ohio; and that from the time of said grant of said exclusive right to him hitherto, the said exclusive right has been, and now is, of great value to him, to wit, the value of ten thousand dollars. Yet the defendants, well knowing the premises, but contriving to injure the plaintiff, afterwards, to wit, on the first day of April, A. D. 1848, and at divers times before and afterwards, during said term of fourteen years mentioned in said letters patent, and after the date of the patent last mentioned, and after the assignments aforesaid to the plaintiff, and before the commencement of this suit and the purchase of this writ, to wit, at the said town of Cincinnati, in the county of Hamilton, to wit, at the district of Ohio aforesaid, unlawfully and wrongfully, and without the consent and allowance, and against the will of the plaintiff, did use the said machine upon and over the aforesaid route from said town of Wheeling, in the State of Virginia, to said town of Cincinnati, in the State of Ohio, and between said towns, to wit, at the district of Ohio aforesaid, in violation and infringement of the exclusive right so secured to the plaintiff as aforesaid, and contrary to the form of the statute of the United States in such case made and provided. Whereby the plaintiff has been greatly injured, and deprived of great profits and advantages which he might and otherwise would have derived from said invention, and has sustained an actual damage to the amount of ten thousand dollars. And by force of the statute aforesaid an action has accrued to him to recover the said actual damage, and such additional amount, not exceeding in the whole three times the amount of such actual damage, as the court may see fit to order and adjudge. Yet the said defendants, though requested, have never paid the same, or any part thereof, to the plaintiff, but have refused and refuse yet to do so.

And for that whereas, also, the said Samuel F. B. Morse was the original inventor of a new and useful improvement in a machine, in the letters patent hereinafter mentioned, and fully described in the same, being a new and useful improvement in electro-magnetic telegraphs, and the said Samuel F. B. Morse being so as aforesaid the inventor, and being also a citizen of the United States, on the 11th day of April, A. D. 1846, upon due application therefor, did obtain certain letters patent therefor in due form of law, under the seal of the Patent office of the United States, signed by the Secretary of State, and countersigned by the Commissioner of Patents of the United States, bearing date the day and year aforesaid, whereby there was secured to him, his heirs, executors, administrators, or assigns, for the term of fourteen years from and after the date of said patent, the full and exclusive right and liberty of making, using, and vending to others to be used, the said new and useful improvement in electro-magnetic telegraphs; which said patent was afterwards, to wit, on the 13th day of June, A. D. 1848, duly surrendered to the Commissioner of Patents on account of a defective specification. And thereupon the said Samuel F. B.

Morse, being so as aforesaid the inventor thereof, and being also a citizen of the United States, to wit, on the said 13th day of June, A. D. 1848, upon such surrender as aforesaid, obtained a new patent for said invention in due form of law, under the seal of the Patent office of the United States, signed by the Secretary of State, and countersigned by the Commissioner of Patents of the United States, bearing date the day and year last aforesaid, whereby there was secured to him, his heirs, administrators, executors, or assigns, for the residue of the period then unexpired for which said original patent was granted, to wit, for the term of fourteen years from and after the said 11th day of April, A. D. 1846, in accordance with a corrected specification duly filed by said patentee, the full and exclusive right and liberty of making, using, and vending to others to be used, the said new and useful improvements in electro-magnetic telegraphs, as by said letters patent in court to be produced will more fully appear.

And the said plaintiff further avers, that afterwards, to wit, on the 22d day of June, A. D. 1847, the said Samuel F. B. Morse and one Alfred Vail, who by assignment and conveyance to him executed by said Morse before that time, to wit, on the 5th day of September, A. D. 1844, and duly recorded on the same day, had become, and then was, the owner of one undivided eighth part of said patent, then subsisting and so granted for said improvement in electro-magnetic telegraphs as aforesaid, and of said invention, did, by Amos Kendall, their duly authorized attorney, assign and convey to him, the said plaintiff, among other things, all the right, title, and claim, joint or several, which they, or either of them, had, either as owners or assignees of said patent that had been previously issued to said Morse, and was then subsisting as aforesaid, or as party or parties to any contract or contracts relating thereto, theretofore entered into by them, or either of them, to use upon and over the route from the town of Wheeling, in the State of Virginia, to the town of Cincinnati, in the State of Ohio, and between said towns, the aforesaid new and useful improvement in electro-magnetic telegraphs, to wit, at the district of Ohio aforesaid; to hold and enjoy the same during the existence of said Morse's said patent, and during the existence of all patents that might thereafter be obtained by them, or either of them, in renewal thereof or auxiliary thereto.

And the plaintiff avers that the said assignment from the said Morse and Vail to said plaintiff was duly recorded in the Patent office of the United States, afterwards, to wit, on the 3d day of June, A. D. 1847.

And said plaintiff further avers, that heretofore, to wit, on the 21st day of December, A. D. 1846, the said Samuel F. B. Morse, Alfred Vail, and one Leonard D. Gale, who, at said date last mentioned, was the owner of one undivided sixteenth part of said patent just granted for said improvement in electro-magnetic telegraphs as aforesaid, and of said invention, by virtue of an assignment and conveyance thereof to him executed by said Morse theretofore, to wit, on the 5th day of March, A. D. 1838, and which was afterwards, to wit, on the 12th day of September, A. D. 1844, duly recorded in the Patent office of

the United States; but who afterwards, to wit, on the 2nd day of February, A. D. 1847, assigned and reconveyed to said Morse all the said interest in the said sixteenth part of said invention which had been so conveyed to him by said Morse as aforesaid; which said last mentioned assignment and reconveyance was afterwards, to wit, on the day and year last aforesaid, duly recorded in the Patent office of the United States, did, by Amos Kendall, their duly authorized attorney, together with the said Francis O. J. Smith, assign and convey by a certain deed of trust of the date last aforesaid to one Eliphalet Case, jr., as and in the capacity of trustee, only as therein provided, among other things, the exclusive right of using upon and over the route aforesaid, from the town of Wheeling, in the State of Virginia, to the town of Cincinnati, in the State of Ohio, and between said towns, the said improvement in electro-magnetic telegraphs, embraced in said assignment under the name of Morse's Electro-magnetic Telegraph; which said assignment to the said Eliphalet Case, jr., was duly recorded in the Patent office of the United States, afterwards, to wit, on the 23rd day of December, A. D. 1846.

And said plaintiff further avers, that afterwards, to wit, on the 16th day of January, A. D. 1847, the said Eliphalet Case, jr., by virtue of authority for that purpose in him vested by said deed of trust so assigning and conveying said right to him in trust as aforesaid, did, by a certain deed by him then executed, appoint as additional trustees with himself, and each with equal powers, privileges, and rights with himself in the premises, the following individuals, to wit, John C. Wright, Lewis Worthington, George S. Coe, and Abel C. Thomas, and did by said deed assign and convey, among other things, to said Wright, Worthington, Coe, and Thomas, such an interest in the property of said improvement in electro-magnetic telegraphs, embraced therein under the name of Morse's Electro-magnetic Telegraph, so conveyed to him in trust by said deed just mentioned, as should make them respectively equal owners and joint holders with himself of the same as and in the capacity of trustees only, as provided in said deed of trust assigning and conveying said right to said Eliphalet Case, jr., in trust as aforesaid. And said plaintiff avers, that afterwards, to wit, on the day of February, A. D. 1848, at the district of Ohio, aforesaid, the said John C. Wright, Lewis Worthington, George S. Coe, Abel C. Thomas, and Eliphalet Case, jr., assigned and conveyed to the said plaintiff, among other things, all the right, title, and interest in them vested in and to said improvement on electro-magnetic telegraphs, by virtue of said deeds of trust executed to the said Eliphalet Case, jr., and to the said Wright, Worthington, Coe, and Thomas, as aforesaid, and said trusts were then and there wholly cancelled and terminated.

And said plaintiff avers, that afterwards, to wit, on the day of March, A. D. 1848, said assignment last mentioned was duly recorded in the Patent office of the United States; and said plaintiff avers, that by said assignment and conveyance to him executed, he became and was, and ever since hath been, the owner of the exclusive right to use

said new and useful improvement in electro-magnetic telegraphs within and throughout a specified part of the United States, to wit, upon and over said route from the town of Wheeling, in the State of Virginia, to the town of Cincinnati, in the State of Ohio, and between said towns, to wit, at the district of Ohio aforesaid; and that from the time of said grant to him of said exclusive right hitherto, the said exclusive right has been, and now is, of great value to him, to wit, the value of ten thousand dollars.

Yet the defendant, well knowing the premises, but contriving to injure the plaintiff, afterwards, to wit, on the first day of July, A. D. 1848, and at divers times before and afterwards, during said term mentioned in said letters patent, and after the date of said patent last mentioned, and after the assignments aforesaid to the plaintiff, and before the commencement of this suit and the purchase of this writ, to wit, at the district of Ohio aforesaid, unlawfully and wrongfully, and without the consent and allowance, and against the will of the plaintiff, did use the said new and useful improvement in electro-magnetic telegraphs upon and over the aforesaid route from the said town of Wheeling, in the State of Virginia, to the said town of Cincinnati, in the State of Ohio, and between said towns, to wit, at the district of Ohio aforesaid, in violation and infringement of the exclusive right so secured to the plaintiff as aforesaid, and contrary to the form of the statute of the United States in such cases made and provided, whereby the plaintiff has been greatly injured and deprived of great profits and advantages which he might, and otherwise would, have derived from said invention, and has sustained an actual damage to the amount of ten thousand dollars; and by force of the statute aforesaid an action hath accrued to him to recover the said actual damage and such additional amount, not exceeding in the whole three times the amount of such actual damage, as the court may see fit to order and adjudge. Yet the defendants, though requested, have never paid the same or any part thereof to the plaintiff, but have refused, and yet refuse, so to do.

By EWING, SWAN & ANDREWS,
Attorneys for plaintiff.

And thereupon the said plaintiff, by his attorneys, entered a rule in said clerk's office on said defendants to plead to said declaration by the November rule day of said court then next ensuing; at which time, to wit, at rules of said court, held as aforesaid, for the month of November, in the year of our Lord eighteen hundred and forty-eight, came the said defendants, by their attorneys, and filed in said clerk's office their pleas to the foregoing declaration, in the words and figures following, to wit:

"In the circuit court of the United States, district of Ohio.

HEMAN B ELY et al.
vs.
FRANCIS O. J. SMITH.

And the said defendants come and crave oyer of the said several let-

ters patent in the declaration mentioned, and they are read to them, &c.

1. And the said defendants, by their attorney, come and defend the wrong and injury, when, &c., and say that they are not guilty of the said supposed grievances above laid to their charge, or any or either of them, or any part thereof, in manner and form as the said plaintiff hath above thereof complained against them, and of this they put themselves upon the country, &c.

2. And for a further plea in this behalf the said defendants say, that the said plaintiff his action ought not to have or maintain, because they say that heretofore, to wit, on the 13th day of June, 1845, the said plaintiff agreed with the said defendant, Henry O'Reilly, among other things, that in consideration that he, the said O'Reilly, and those whom he might associate with him, would raise the necessary capital to construct a line of telegraph between the said towns of Wheeling and Cincinnati, in the declaration mentioned, that on the said line when constructed, the said O'Reilly, and those associated with him, and the said plaintiff, together with Samuel F. B. Morse, Aaron Vail, and Leonard D. Gayle, might and would use the said inventions and improvements, in the declaration mentioned, for their mutual benefit and profit. And the said defendants further aver, that the said defendants, save said O'Reilly, did associate with him, said O'Reilly, in raising capital in pursuance of said agreement, and that they, the said defendants, with such capital, did construct said line between the towns of Wheeling and Cincinnati, being the same line or route in the declaration mentioned. And the said defendants further aver, that the said inventions and improvements, in the declaration mentioned, were used on said line or route under the said agreement, and not otherwise. And this they are ready to verify; wherefore they pray judgment, &c.

3. And for a further plea in this behalf the said defendants say, that the said plaintiff his action ought not to have or maintain, because they say that heretofore, to wit, on the thirteenth day of June, 1845, at said district, the said plaintiff, together with Samuel F. B. Morse, Leonard D. Gayle, and Aaron Vail, then and there owning the right to said inventions and improvements in the declaration mentioned, agreed with the said defendants, that in consideration that they, the said defendants, would construct a line of telegraph from the town of Wheeling to the city of Cincinnati, at their own costs and charges, on the said line so constructed the said inventions and improvements in the declaration mentioned might and should be used for the benefit and profit, as well of the said plaintiff, Morse, Gayle, and Vail, their representatives or assigns, owning the said right, as of the said defendants. And the said defendants aver, that afterwards, to wit, on the day and year aforesaid, at the district aforesaid, they did construct said line at their own costs and charges, being the same line or route in the declaration mentioned; and that the said inventions and improvements in the declaration mentioned have been used thereon under the said

agreement, and not otherwise; and this they are ready to verify; wherefore they pray judgment, &c.

4. To 1st count. And for a further plea, as to the first count of the said declaration, the said defendants say, that the said plaintiff his action ought not to have or maintain, because they say that they, the said defendants, did use the said machine in said count mentioned upon and over the said route, from the said town of Wheeling to the said town of Cincinnati, and between said towns, by the leave and license of the said plaintiff to the said defendants for that purpose first given and granted, to wit, on the first day of June, 1847, at said district; and this they are ready to verify; wherefore they pray judgment, &c.

5. And for a further plea, as to the said first count, the said defendants say, that the said plaintiff his action ought not to have or maintain, because they say that the said specification, annexed to and making part of the said letters patent, with the drawings thereto annexed, does not contain a written description of the said invention or discovery, and of the manner or process of making, constructing, and using the same in such full, clear, and exact terms as to enable any person skilled in the art or science to which it appertains, or with which it [is] most nearly connected, to make, construct, and use the same; and this they are ready to verify; wherefore they pray judgment, &c.

6. And for a further plea, as to the said first count, the said defendants say, that the said plaintiff his action ought not to have or maintain, because they say that before the supposed grant of the said original letters patent in the said count mentioned, to wit, on the 18th day of August, 1838, the said Samuel F. B. Morse took out and received letters patent for the same invention and discovery in the said count mentioned in a foreign country, to wit, in the then kingdom of France, and from the then king of the French; and the said defendants aver, that the said letters patent in said count mentioned are not limited to the term of fourteen years from the date or publication of said foreign letters patent; and this they are ready to verify; wherefore they pray judgment, &c.

7. And for a further plea, as to the said first count, the said defendants say, that the said plaintiff his action ought not to have or maintain, because they say, that more than six months next before the filing by the said Samuel F. B. Morse, of the specification and drawings annexed to the said supposed original letters patent in said count mentioned, to wit, on the 18th day of August, 1838, he, the said Samuel F. B. Morse, took out and received letters patent for the same invention and discovery in the said count mentioned in a foreign country, to wit, in the then kingdom of France, and from the then king of the French; and the said defendants aver, that the said letters patent in said count mentioned, and neither of them, were or are limited to the term of fourteen years from the date or publication of said foreign letters patent; and this they are ready to verify; wherefore they pray judgment, &c.

8. And for a further plea, as to the said first count, the said defendants say, that the said plaintiff his action ought not to have or maintain, because they say that the said letters patent in said count mentioned are in the words following, to wit:

No. 117.

The United States of America, to all to whom these letters patent shall come:

Whereas Samuel F. B. Morse, Poughkeepsie, New York, has alleged that he has invented a new and useful improvement in the mode of communicating information by signals, by the application of electro-magnetism, (for which letters patent were granted on the 20th of June, 1840, which letters patent were surrendered and reissued on the 15th day of January, 1846, which last letters patent are hereby cancelled on account of a defective specification) which he states has not been known or used before his application; has made oath that he is a citizen of the United States; that he does verily believe that he is the original and first inventor or discoverer of the said improvement, and that the same hath not, to the best of his knowledge and belief, been previously known or used; has paid into the Treasury of the United States the sum of fifteen dollars, and presented a petition to the Commissioner of Patents, signifying a desire of obtaining an exclusive property in the said improvement, and praying that a patent may be granted for that purpose. These are therefore to grant, according to law, to the said Samuel F. B. Morse, his heirs, administrators, or assigns, for the term of fourteen years from the twentieth day of June, one thousand eight hundred and forty, the full and exclusive right and liberty of making, constructing, using, and vending to others to be used, the said improvement; a description whereof is given in the words of the said Saml. F. B. Morse in the schedule hereunto annexed, and is made part of these presents.

In testimony whereof I have caused these letters to be made patent, and the seal of the Patent office has been hereunto affixed.

[SEAL.] Given under my hand, at the city of Washington, this thirteenth day of June, in the year of our Lord one thousand eight hundred and forty-eight, and of the independence of the United States of America the seventy-second.

JAMES BUCHANAN,
Secretary of State.

Countersigned and sealed with the seal of the Patent office.

EDMUND BURKE,
Commissioner of Patents.

The schedule referred to in these letters patent, and making part of the same.

To all to whom these presents shall come:

Be it known that I, Samuel F. B. Morse, now of Poughkeepsie, in

the county of Duchess, in the State of New York, have invented a new and useful apparatus for, and system of, transmitting intelligence between distant points by means of electro-magnetism, which puts in motion machinery for producing sounds or signs, and recording said signs upon paper or other suitable material; which invention I denominate the American Electro-magnetic Telegraph; and that the following is a full, clear, and exact description of the principle or character thereof, which distinguishes it from all other telegraphs previously known, and of the manner of making and constructing said apparatus, and applying said system, reference being had to the accompanying drawings, making part of this specification, in which examples 1, 2, and 3 show my system of signs, consisting of a combination of dots and spaces, and of dots, spaces, and horizontal lines, intended to represent: Example 1, signs for numerals; example 2, signs for compound numerals; example 3, signs for letters; all which signs may also represent words or sentences. Examples 4, 5, and 6 are specimens of the form of type used for regulating the imprinting of the signs; example 7 is the type rule; example 8, apparatus for connecting and breaking the electrical or galvanic circuit; example 10, fig. 1, is a perspective view of the registering apparatus; fig. 2, a top plan; fig. 3, a side elevation of the train of wheels, moving the paper, and regulating its motion; fig. 4, a sectional elevation of the registering lever and parts appended thereto; fig. 5, alarm apparatus; example 11 is a diagram showing the relative positions of the different parts of an approved form of apparatus, including a combination of circuits.

Prior to my first application for a patent, it had been essayed to use the currents of electricity or galvanism for telegraphic purposes, either by decomposition or the action or exercise of the deflective force of a current upon a magnetized bar or needle, which decomposition or deflection required to be noted by ocular inspection at the instant the sign was made. By my invention, intelligence can be transmitted and imprinted on paper, or other suitable substance, without requiring the aid of any person at the station to which the communication is transmitted, so as to be read at any time thereafter. My apparatus, for this purpose, consists of two principal parts or combinations.

The first part consists of a galvanic battery or any known generator of galvanism or electricity, a galvanic or electric circuit composed of any known conductors of electricity, a port rule and signal lever, or other contrivance for closing and breaking the circuit, all in combination with an electro-magnet, or device, by which the motive power of the electric or galvanic current, which I call electro-magnetism, may be developed and applied to give motion to other machinery, for the purpose of making or imprinting intelligible characters, signs, or letters, at any distances. The conductors may be suspended in the air upon posts or otherwise, or buried in the ground, being always well insulated at the posts or in the ground.

This combination is illustrated in the annexed drawings in example 11, fig. 2, where D indicates the battery; a a, the circuit; E, the port

rule; B, the signal lever; and C, the electro-magnet. The new parts and the operation of this portion of my apparatus I thus further describe, viz: At any convenient point in the circuit (generally near the generator) a break is made in the conductor, and the two ends thereof are immersed in mercury cups, as shown in the drawing s, at E, E, fig. 1, example 8. To connect the circuit I employ an inverted U formed piece of metal, or other proper connector, A, impended over the mercury cups E E in the end of a horizontal lever, denominated in said drawing the "signal lever," whose fulcrum is at a, so that when the connector A is *dipt* into the cups, the circuit is completed. Between the fulcrum and connector A, there is affixed to the under sides of the lever, and projecting downward, a triangular tooth, b, which bears on the upper surface of the types about to be described, and is raised or lowered by them. The lever may be counterbalanced by a weight or its equivalent, as at C, to make it move easily. The types are composed of flat, straight strips of metal, as shown in examples 4 and 5 of the drawings hereunto annexed, having their upper edges indented to suit the character to be represented, and which will be hereinafter more fully set forth in the description of the operation of the machine. The indentations are made of sufficient depth to allow the connector A to be plunged into the mercury cups, and the highest surface raises it from them.

It is obvious that the forms of the upper surface of the types may be reversed, and the cog b placed on the other side of the fulcrum, and the same effect would be produced. The types are set up and confined in a rule to form any required sentences in one long line; this rule, denominated in the drawing, example 8, a type rule, has, on its under side, a rack that gears into a pinion x, on a shaft under the grooved railways, D, of common construction, on which said rule slides, and is directed under the cog b, on the lever; the types are advanced at a regular speed by the application of any convenient power to the pinion x, and bring the notches or raised and depressed parts successively under the cog b.

The mercury cups may be dispensed with, and any other convenient metallic contact made to accomplish the same end, and the closing and breaking of the circuit may be effected by applying the hand or any other machinery to the signal lever, or by any other mode adapted to the same end. The closing of the circuit, by the depression of the signal lever, causes the electric current to run upon the circuit aaEX, 11, fig. 2, and through the helices of the electro-magnet C, which is thus charged with power to move any machinery which may be connected with it in a proper manner.

The second part of my invention consists of a register for recording the characters, signs, or letters transmitted from any distance, and is composed of the following parts in combination, viz: A bent lever A, as shown most distinctly in example 10, fig. 4; to one arm of this lever there is attached one or more pencils, fountain pens, or other suitable marking instruments B, directly under which is placed a suitable cylin-

der D, over which the paper passes on which the marking for signs are made. This cylinder turns on its axis, and is connected by a train of wheels and pinions with a barrel m, fig. 3, example 10, of common construction, which is driven by a weight and cord wound thereon, and also with a fly K of same fig., which regulates its motion. To the other arm of the lever, (which is also an armature,) is affixed a spiral spring i, as seen in example 10, figs. 1 and 4; near the cylinder D, a reel or spool, d, is placed, on which a strip of paper or other markable material is wound, the end of which is carried over the cylinder D, and is confined thereon, by means of two tapes and endless bands or their equivalents, one at each edge, which pass around two pulleys b b, one on each side of cylinder D; this is clearly represented in figs. 2 and 4, example 10. The clock work is kept at rest by a detent g, in contact with the fly-wheel K, in fig. 3, and connected with the lever, as shown in fig. 5.

To the register may be attached an alarm bell, as shown in example 10, fig. 5, the machinery for striking which may be variously modified, and therefore need not be described. The register or record part of my invention is operated upon by the first part in the following manner, viz., the short end of the pen lever in the second part, as seen in example 10, fig. 4, is an armature f, which is brought in proximity to the electro-magnet c, in the circuit a a, as shewn in example 11, fig. 2, and in example 10, fig. 4. The electro-magnet C, being charged by closing the circuit, attracts the armature, bringing it nearly in contact, thus imparting a movement to the lever A. By this movement of the lever the detent, fig. 5, example 10, is removed from the fly-wheel, and the clock work begins to move, carrying the paper over the cylinder D, and at the same time the fountain pen, pencil, or other marking instrument, is, by the action of the lever, set in motion. The circuit being broken, the lever is brought back to its position by the spiral spring i, and by the closing and breaking of the circuit, more or less rapidly, dots and spaces and marks of any required length are made upon the paper, and in any required combinations. My system of characters consists of dots, spaces, and lines variously combined to form letters and other characters, a specimen of which is represented in example 1, 2, and 3.

To make a dot, a notch or indentation is required in the types into which the cog or tooth in the "signal lever" will fall, and instantly rise from as the types move onward, and when a line is to be formed on the paper at the register as a sign, the notch in the type is extended, so that the lever will remain down for a space of time sufficient to make the line required. The alarm bell shown at A, example 10, fig. 5, may be struck by means of a hammer actuated by a supplementary electro-magnet placed in the same circuit as that first named. Any convenient number of registers and registering stations may be connected with the same circuit, all constructed and operating as above described. To extend more effectually the communication by my apparatus, I adopt the following arrangement, whereby I can use any

number of additional batteries or generators of electricity, and by which I can connect, progressively, any number of consecutive circuits, viz., I place, at any point in the first circuit, an electro-magnet, and opposite its poles I place an armature on a lever, like that described for registering, but instead of using the said lever to mark with, I use it to close and break a second circuit, precisely as the signal lever is used to close and break the first circuit. The second circuit has an independent battery, and may be used to work a register or other apparatus for registering, or to close and break a third circuit or both; and thus, by a combination of circuits, the requisite power can be obtained at any distances, ad infinitum. This combination is shown in example 11, fig. 1.

It will be observed that my vocabulary system of signs or secret writing by cypher, can be conveniently used in communicating by this telegraph, and any mode of closing and breaking a circuit may be adopted, the object being to do so at proper intervals.

Claims.

First. Having thus fully described my invention, I wish it to be understood that I do not claim the use of the galvanic current, or current of electricity, for the purpose of telegraphic communications generally; but what I specially claim as my invention and improvement, is making use of the motive power of magnetism when developed by the action of such current or currents substantially as set forth in the foregoing description of the first principal part of my invention, as means of operating or giving motion to machinery which may be used to imprint signals upon paper or other suitable material, or to produce sounds in any desired manner, for the purpose of telegraphic communication at any distances. The only ways in which the galvanic current had been proposed to be used prior to any invention and improvement, were by bubbles resulting from decomposition and the action or exercise of electrical power, upon a magnetized bar or needle; and the bubbles and the deflections of the needles thus produced, were the subjects of inspection, and had no power or were not applied to record the communication. I therefore characterize my invention as the first recording or printing telegraph by means of electro-magnetism. There are various known modes of producing motions by electro-magnetism, but none of these had been applied, prior to my invention and improvement, to actuate or give motion to printing or recording machinery, which is the chief point of my invention and improvement.

Second. I also claim, as my invention and improvement, the employment of the machinery called the register or recording instrument, composed of the train of clock wheels, cylinders, and other apparatus, or their equivalents, for moving the materials upon which the characters are to be imprinted, and for imprinting said characters, substantially as set forth in the foregoing description of the said principal part of my invention.

Third. I also claim, as my invention and improvement, the combi-

nation of machinery herein described, consisting of the generator of electricity, the circuit of conductors, the contrivance for closing and breaking the circuit, the electro-magnet, the pen or contrivance for marking, and the machinery for sustaining and moving the paper all together, constituting one apparatus or telegraphic machine, which I denominate the American Electro-magnetic Telegraph.

Fourth. I also claim as my invention the combination of two or more galvanic or electric circuits, with independent batteries, substantially by the means herein described, for the purpose of obtaining the diminished force of electro-magnetism in long circuits, and enabling me to command sufficient power to put in motion regulating or recording machinery at any distances.

Fifth. I claim as my invention the system of signs, consisting of dots and spaces, and of dots, spaces, and horizontal lines for numerals, letters, words or sentences, substantially as herein set forth and illustrated, for telegraphic purposes.

Sixth. I also claim as my invention the system of signs consisting of dots and spaces, and of dots, spaces, and horizontal lines, substantially as herein set forth and illustrated, in combination with machinery for recording them as signals for telegraphic purposes.

Seventh. I also claim as my invention the types, or their equivalent, and the type rule and port rule, in combination with the signal lever or its equivalent, as herein described, for the purpose of closing and breaking the circuit of galvanic or electric conductors.

Eighth. I do not propose to limit myself to the specific machinery, or parts of machinery, described in the foregoing specification and claims, the essence of my invention being the use of the motive power of the electric or galvanic current, which I call electro-magnetism, however developed, for marking or printing intelligible characters, signs of letters, at any distances, being a new application of that power, of which I claim to be the first inventor or discoverer.

SAMUEL F. B. MORSE.

Witnesses:
GEORGE WOOD,
J. READ BAILEY.

THE UNITED STATES' PATENT OFFICE.

To all persons to whom these presents shall come, greeting:

This is to certify, that the annexed is a true copy of letters patent issued to Samuel F. B. Morse, on the 20th June, 1840; re-issued with amended specifications, the 13th June, 1848. [SEAL.]

In testimony whereof, I, Edmund Burke, commissioner of patents, have caused the seal of the Patent office to be hereunto affixed, this eighth day of July, in the year of our Lord one thousand eight hundred and forty-eight, and of the independence of the United States the seventy-second.

EDMUND BURKE."

And the said defendants further say, that "the use of the motive power of the electric or galvanic current, however developed, for marking or printing intelligible characters, signs, or letters, at any distances," is a substantial and material part of the thing patented by the said letters patent in the said count mentioned; and the said defendants aver, that the said Samuel F. B. Morse was not the original and first inventor or discoverer of the said part of the thing patented, but that the same was before known to one Dr. Stanheil, of Munich, in the kingdom of Bavaria, and used on a line of telegraph from Munich to Bogenhausen, in the said kingdom of Bavaria; and this they are ready to verify; wherefore they pray judgment, &c.

9. And for a further plea as to the said first count, the said defendants say, that the said plaintiff (his action) ought not to have or maintain; because they say, that the said letters patent in said count mentioned are the same in tenor and effect as the letters patent set forth in the 8th above plea of said defendants; and to which, as therein copied and set forth, reference is had as part of this plea. And the said defendants further say, that the mode and process of propelling and connecting currents of electricity or galvanism through two or more circuits of metallic conductors, is a substantial and material part of the thing patented by the said letters patent in said count mentioned; and the said defendants aver, that the said Samuel F. B. Morse was not the original and first inventor or discoverer of the said part of the said thing patented, but that the same was before known to one Edward Davy, of London, in England; and this they are ready to verify; wherefore they pray judgment, &c.

10. To 2d count. And the said defendants, for further plea as to the second count of said declaration, say, that the said plaintiff (his action) ought not to have or maintain, because they say that they, the said defendants, did use the said improvement in the said count mentioned upon and over the said route from the said town of Wheeling to the said town of Cincinnati, and between the said towns, by the leave and license of the said plaintiff to the said defendants for that purpose first given and granted, to wit, on the first day of June, 1847, at the said district; and this they are ready to verify; wherefore they pray judgment, &c.

11. And the said defendants, for further plea as to the said second count, say, that the said plaintiff (his action) ought not to have or maintain, because they say that the said improvement in the said count mentioned was, at the time of the application of the said Samuel F. B. Morse for a patent therefor, in public use, with the consent and allowance of the said Samuel F. B. Morse; and of this they put themselves upon the country, &c.

12. And the said defendants, for further plea as to the said second count, say, that the said plaintiff (his action) ought not to have or maintain, because they say that the said improvement in the said count mentioned was, at the time of the application of the said Samuel F. B. Morse for a patent therefor, on sale with the consent and allowance

of the said Samuel F. B. Morse; and of this they put themselves on the country, &c.

13. And for a further plea as to the said second count the said defendants say, that the said plaintiff (his action) ought not to have or maintain, because they say that, before the application of the said Samuel F. B. Morse for a patent for the said improvement, in the said count mentioned, to wit, on the first day of June, 1844, and on other days and times before the said application, at, to wit, Baltimore, in the State of Maryland; Washington, in the District of Columbia, and on a line of telegraph between said places; Philadelphia, in the State of Pennsylvania; New York, in the State of New York, and on a line of telegraph between said places; Harrisburgh and Lancaster, in the State of Pennsylvania, and on a line of telegraph between the same; and Albany and Utica, in the State of New York, and on a line of telegraph between the same; the said improvement, in the said count mentioned, was in public use with the consent and allowance of the said Samuel F. B. Morse; and this they are ready to verify; wherefore they pray judgment, &c.

14. And for a further plea as to the said second count the said defendants say, that the said plaintiff his action ought not to have or maintain, because they say, that the said letters patent in said count mentioned are in the words following, to wit:

"No. 118.

THE UNITED STATES OF AMERICA,

To all to whom these letters patent shall come:

Whereas Samuel F. B. Morse, [of] Poughkeepsie, New York, has alleged that he has invented a new and useful improvement in electro-magnetic telegraphs, (for which letters patent were granted on the 11th day of April, 1846, which letters patent are hereby cancelled on account of a defective specification,) which he states has not been known or used before his application; has made oath that he is a citizen of the United States; that he does verily believe that he is the original and first inventor or discover[er] of the said improvement, and that the same hath not, to the best of his knowledge and belief, been previously known or used; has paid into the Treasury of the United States the sum of fifteen dollars, and presented a petition to the Commissioner of Patents, signifying a desire of obtaining an exclusive property in the said improvement, and praying that a patent may be granted for that purpose. These are therefore to grant, according to law, to the said Samuel F. B. Morse, his heirs, administrators, or assigns, for the term of fourteen years, from the eleventh day of April, one thousand eight hundred and forty-six, the full and exclusive right and liberty of making, constructing, using, and vending to others to be used, the said improvement; a description whereof is given in the words of the said Samuel F. B. Morse in the schedule hereunto annexed, and made part of these presents.

In testimony whereof I have caused these letters to be made [SEAL.] patent, and the seal of the Patent office has been hereunto affixed.

Given under my hand at the city of Washington, this thirteenth day of June, in the year of our Lord one thousand eight hundred and forty-eight, and of the independence of the United States of America the seventy-second.

JAMES BUCHANAN,
Secretary of State.

Countersigned and sealed with the seal of the Patent office.

EDMUND BURKE,
Commissioner of patents.

The schedule referred to in these letters patent, and making part of the same: Be it known, that I, Samuel F. B. Morse, now of Poughkeepsie, in Dutchess county, in the State of New York, have invented a new and useful improvement in the electro-magnetic telegraph, and I do hereby declare that the following is a full, clear, and exact description of the object, construction, and operation thereof, reference being had to the accompanying drawings, and making part of the same.

Object of the invention.

The original and final object of all telegraphing is the communication of intelligence at a distance by signs or signals. Various modes of telegraphing, or making signs or signals at a distance, have for ages been in use. The signs employed heretofore have had one quality in common; they are evanescent; shown or heard a moment, and leaving no trace of their having existed. The various modes of these evanescent signs have been by beacon fires of different characters, by flags, by balls, by reports of fire arms, by bells heard from a distant position, by moveable arms from ports, &c. I do not, therefore, claim to be the inventor of telegraphs generally. The electric telegraph is a more recent kind of telegraph, proposed within the last century, but no practical plan was devised until almost sixteen years ago. Its distinguishing feature is the employment of electricity to effect the same general result of communicating intelligence at a distance of signs or signals.

The various modes of accomplishing this end by electricity have been the employment of common or machine electricity, as early as 1787, to show an evanescent sign by the divergence of pith balls. The employment of common or machine electricty in 1794, to show an evanescent sign by the electric spark. The employment of voltaic electricity in 1809, to show an evanescent sign by the evolution of gas bubbles, decomposed from a solution in a vessel of transparent glass. The employment of voltaic electricity in the production of temporary magnetism in 1820, to show an evanescent sign by deflecting a magnet or compass needle. The result contemplated from all these electric telegraphs was the production of evanescent signs or signals only. I

do not, therefore, claim to have first applied electricity to telegraphing for the purpose of showing evanescent signs or signals. The original and final object of my telegraph is to imprint characters at any distance as signals for intelligence; its object is to mark or impress them in a permanent manner. To attain this end, I have applied electricity in two distinct ways:

1st. I have applied, by a novel process, the motive power of electro-magnetism, or magnetism produced by electricity, to operate machinery for printing signals at any distance.

2d. I have applied the chemical effects of electricity to print signals at any distance; the apparatus or machine with which I mark or imprint signs or letters for telegraphic purposes at a distance, I thus describe, viz:

1st. The machinery at the transmitting terminus.

2d. The machinery at the receiving or recording terminus.

3d. The arrangement of circuits or conductors, consisting of the main circuit and local circuit or circuits, connecting the machinery of both termini.

1st. The machinery at the transmitting terminus consists of the key, or correspondent N, see sheet III, figure 6. The part N is of wood, or some convenient non-conducting substance; 3 is a spring, or lever of metal fastened upon N, at one end, and terminating at the other in a knob or hammer t, faced with platinum; u is a metallic anvil, also faced with platinum. Parts of the electric conductor terminate at *at* the key, the one part at the anvil u, and the other at the hammer t, in such a way that the only part broken of the entire circuit is between the points u and t. The object of the key is to close and break the circuit.

2d. Machinery at the receiving terminus consists of the receiving magnet, see fig. 4, sheet II; HH are the coils or helices of the magnet, being part of the main circuit of conductors; KK, see fig. 4 and 5, sheets II and III, represent the iron of the electric magnet in a form to enable me to enlarge the coils or helices, without separating to an inconvenient distance the poles LL, from each other. KK represents the upper and lower portions of the magnet, which are without the coils, and one of which unites two portions of the magnet within the coils, forming one piece with them. The other bar is united at one end to this piece by a screw at v, and runs divergent from the position of the other bar in such a manner as to bring the two poles, LL, near each other, but not in contact. This arrangement admits of coils of any desired size to form the helices of a magnet, without requiring any increase in the armature, thus allowing to the armature a quicker vibration and a more delicate adjustment.

The special object of the receiving magnet is to close and break at a distance another circuit called a local circuit; in which local circuit is a magnet and battery, or their equivalents, for the production of the power necessary to mark or imprint characters.

S is the armature of the receiving magnet affixed to the metallic lever

T, supported by the metal standard P, which is attached to a wooden frame, or other non-conducting substance, M. j is a spring so attached to the lever T as to withdraw the armature S from the poles L L of the magnet; when the magnetic force is withdrawn, the other extremity of the spring being so attached to a thumb-screw as to be adjusted to any desired degree of strength or delicacy. I is a stop (being a screw with a head) to regulate, in connexion with another metallic screw, Y, the limits of motion of the lever T. The screw Y has its end, W, faced with platinum, in order to form better contact with the platinum point or surface V, on the lever T. On the proper adjustment of these two screws, I and Y, depends the efficiency of the receiving magnet. The limits of motion should be such that, when the magnet is charged, the point V should come in contact with the point W, but the surface of the armature should not touch the surface of the poles of the magnet; and, when the magnet is not charged, the armature should not be withdrawn by the spring j beyond the sphere of the magnet's attraction.

The register consists of a series of wheels and pinions, and its object is to regulate the movement of paper or other material upon which to imprint telegraphic characters.

A A, &c., sheet III, figs. 1 and 3, the platform of wood, or other convenient material, upon which the machinery is erected. B, B, and C, the standards for the reel of paper, and c, the reel of paper upon which is to be imprinted the telegraphic characters. D, one form of the arrangement of the wheels and pinions of the register.

d, e, rollers for drawing the paper in contact with the pen or marking roller 2. Seen, also, on sheet III, fig. 10; sheet 2, fig. 3. E, the helices or coils and magnet of the register.

F, the pen lever and armature of the magnet attached; 5 and 6 are stops, being thumb-screws attached to some convenient fixed part of the machinery for limiting the motion of lever F, to which is affixed both the armature of the magnet E, and the pen point or points g. The stop 5 arrests the movement of the armature as it moves towards, and stop 6 as it recedes from, (by the action of the spring 7,) the poles of the magnet, according as magnetism exists or ceases. The spring 7 so operates on the lever F as to be antagonistic to the attractive power of the electro-magnet E; not so strong as successfully to resist the magnetic power when excited, but strong enough, when the magnetic power ceases, to bring the armature back quickly. The armature, in its movements, should not be allowed to touch the face of the magnet, nor should the point or points g, (of which there may be one or more, at pleasure,) be allowed to touch the bottom of the groove or grooves of the roller 2. The pen point or points, if they are screws, aid in an exact adjustment of the pen lever.

The frame D contains the train of wheels, whose motion is caused by the weight a, or its equivalent. Connected with this train of wheels is the self stopping apparatus, G G, which consists of a friction wheel, or break wheel, i i, of any suitable material, as wood, cork, &c., which should be fixed upon any convenient part of the fly-wheel shaft, or the

swiftest, or one of the swiftest, in the train. Another shaft, G, has at one extremity a pulley-wheel, connected by a small cord with another pulley-wheel, G, fixed upon the shaft of the barrel b; the diameter of the pulley-wheel G is greater than that of G¹. Attached to and forming a part of the shaft of G is a small arm or break, K, of *of* metal, or other suitable material, so formed as to come in contact with the friction wheel i i. A light rod of wire, m, secured at one extremity to, and dropped from the pen lever F, has the other extremity with a screw thread cut upon it; which rod passes freely through an opening in the brake K. A nut fitting the screw keeps the rod from passing back through the opening, and at the same time serves to adjust and regulate the movement of the brake. The object of the self-stopping apparatus is to enable the operator to put in action, or to arrest, at pleasure, the movements of the distant register.

The paper rollers, d, c, and 2, fig. 10, sheet III, are so connected with the train of wheels that the paper drawn from the reels, by passing between d and e, is made to be in contact with the grooved cylinder 2. The roller, e, is kept in contact with d by the forked spring in fig. 10 bearing upon the ends of the journals, and regulated in its strength by the thumb-screws 8 and 9. The bearing or sockets for the ends of the shafts of c are not circular, but are slots to allow of a slight movement in a direction with and against the force of the spring, so that the spring shall act with proper power, tending to keep the cylinder in contact with it.

The circuit of conductors. A circuit is a continuous connexion by a good conductor between and uniting the two poles of a battery, or any generator of electricity. I use in my arrangement for imprinting signals two combinations of circuits, in connexion with the receiving magnet, or its equivalent.

The first combination consists of two or more single circuits consecutively arranged, each having a battery and receiving magnet, or their equivalent; the second circuit being dependant on the first circuit, and the third on the second, and the fourth on the third, and so on, ad infinitum, like links of a chain. In this combination of circuits the entire line is dependant on the entirety of each single circuit of the whole series.

The second combination consists of one main single circuit, containing in it any number of receiving magnets, or their equivalents, the helices of which are successively and continuously connected. Each receiving magnet, or its equivalent, closes and breaks an independent second circuit, which is no part of the main line, nor is the main line influenced in its action by the derangement of any one or all of the local or secondary circuits. Both combinations of circuits may be insulated upon posts, or otherwise, to any distances throughout a country.

These two combinations of circuits are illustrated by figures 8 and 9, sheet IV, example 1st. The first link has a battery G' from the poles, P, the circuit connects the anvil D of a key or correspondent, where it terminates.

From E it again commences, and passing through F, continues to the plate C′ in the earth, thence through the earth to plate B, and then through the helices of the magnet A, terminating at the other pole, N, of the battery; at the key F E D is the only part of the circuit broken, to wit, between E and D′; when E is pressed down, so as to touch D, the circuit is closed, and magnetic influence from the battery G′ operating on A, the lever F′ E′ D′ of the second link is brought down, D and E are connected, (the only broken parts of the second circuit similarly arranged as the first,) and the battery G′ operates the helices of the magnet A′ connected with another lever, and so on to a third link, indefinitely. Example 2d, fig. 9.

From one pole of the main battery M the conductor proceeds to the key P, where it is interrupted, (as in the key F E D of the previous example,) and thence proceeds to the plate K in the earth, passing through the earth to the plate L, at the other terminus. From L it passes to a similar key R; thence through the helices of receiving magnet O to an intermediate key Q; thence through the helices of receiving magnet N, and so on, completing the circuit at the other pole of the battery M. The local circuits are without the main line. When not in use, the keys P Q and R are kept closed, so that wherever there is a key upon the line an operator can command the whole line by breaking and closing circuit with the key at his station. Each key operates every receiving magnet, or the line N and O both operate when either of the keys P, Q, or R, is made to close and break the circuit. When the main circuit is closed, the magnetism at N and at O operates the local lever or key which connects the local circuit, having the local battery S and the register magnet T in the local circuit, causing the lever operated by T to mark the characters on the paper at U.

In the example 1st, the receiving magnet propagates the magnetic impulse from circuit to circuit in consecutive and mutually dependent circuits; in example 2d it is propagated from a main circuit simultaneously to independent circuits.

Connexion of the other parts of the machinery with the circuits.

O, sheet 2, figure 3, is the main battery, from one pole of which the main conductor n proceeds to the plate a, in the earth, from thence it passes in the direction of the arrow to the plate O, thence to the key N, where it terminates at t; commencing again at u, it proceeds to the helices of the magnet kk, and back to the other pole of the battery O. R is the local battery, from one pole of which the conductor XXX of the local circuit proceeds to the screw y, and to the point W, where it terminates; commencing at V on the lever T, it passes through the metal standard P to the screw Z, from thence through the helices of the register magnet E, and thence back to the other pole of the battery R.

Having thus described the object and construction of my invention, and the connexion of the different parts of the machinery with each

other, I will now describe the operation of the systems combined as a whole. The register D is at rest, and the weight prevented from acting and moving the clock work by the pressure or friction of the break k upon the brake wheel i, the brake being kept in contact with the brake wheel by the power of the weight itself. Now, when the key or correspondent N is pressed down, so that the metallic hammer D shall strike the anvil u, this being the only part of the main circuit that is interrupted or broken, the circuit of conductors from the two poles of the main battery O are by this act connected, and the electricity from the battery fully passes through the entire circuit n n n, imparting magnetic power to the helices HH, of receiving magnet KK.

The armature S′ in the metallic lever T is now attracted by the poles L L and V W, the only parts of the local circuit broken and brought together, closing the local circuit XXX of the local battery R, which instantly imparts magnetic power to the register magnet E to strike the point or pen g against the paper. The rising of the lever F has suddenly raised the brake k, by means of the rod m, from the brake wheel i, so that now the weight a is permitted to move the whole train. The rollers, d, e, commence drawing the paper in regular time from the paper reel C. If the key which has been pressed down is now released, and the circuit broken, the lever F falls, the power being gone that held it.

But when it falls, the lower end of the brake rod having free play through the opening in the brake lever, does not, in its descent, take down the brake, but leaves it to the slow action of the clock work gradually to bring it down into contact again with the brake wheel. While closing and breaking the circuit, therefore, for imprinting the characters, the machine keeps in movement, forever rising of the lever F in the act of writing or imprinting prevents the break lever from descending, and coming in contact with the brake wheel, for the cord which connects G with G′ slips upon the smallest wheel G′ from the quickness of the action of the lever; but when the circuit remains broken for a short time, the lever F having fallen, there is now no more obstacle to the brake lever k in slowly descending by the action of the machinery, till it comes in contact with the brake wheel i, and thus arrests all motion.

In this manner, by the apparatus or machine, or combination of machinery, above described, I am enabled, standing at any one station, to mark or imprint signs or signals at any other station, however distant; and by a combination of these machines, by means of electro-magnetism, all being in order, I can, at the same instant, by pressure upon one key, mark or impress the same signs or signals at any number of points throughout the American continent. This machinery I call the American Electro-magnetic Telegraph.

Claims.

First. What I claim as my invention, and desire to secure by letters patent, is the employment in a main telegraphic circuit of a device or

contrivance called the receiving magnet, in combination with a short local independent circuit or circuits, each having a register and register magnet, or other magnetic contrivances for registering and sustaining such a relation to the register magnet, or other magnetic contrivances for registering, and to the length of circuit of telegraphic line, as will enable me to obtain, with the aid of a main galvanic battery and circuit, and the intervention of a local battery and local circuit, such motion or power for registering as could not be obtained otherwise, without the use of a much larger galvanic battery, if at all.

Second. I also claim as my invention the combination of the apparatus called the self-stopping apparatus, connected with the clock work of the register, for setting said register in action, and stopping it with the pen lever F, as herein described.

Third. I also claim as my invention the combination of the point or points of the pen and pen lever, or its equivalent, with the grooved roller, or other equivalent device, over which the paper, or other material suitable for marking upon, may be made to pass for the purpose of receiving the impression of the characters, by which means I am enabled to make or print signs or signals upon paper, or other fabric, by indentation; thus dispensing with the use of coloring matter for marking, as specified in my letters patent of January 15th, 1846.

SAML. F. B. MORSE.

Witnesses:
GEO. WOOD.
J. THOMAS CLARK.

The United States Patent office, to all to whom these presents shall come, greeting:

This is to certify, that the annexed is a true copy of letters patent issued to Samuel F. B. Morse on the 11th April, 1846. Re-issued, with amended specifications, the 13th June, 1848.

In testimony whereof I, Edmund Burke, commissioner of patents, have caused the seal of the Patent office to be hereunto affixed, this eighth day of July, in the year of our Lord one thousand eight hundred and forty-eight, and of the independence of the United States the seventy-second. [SEAL.]

EDMUND BURKE.

And the said defendants further say, that the combination of a pen lever, pen point or points, and roller, in the specification annexed to the said letters patent mentioned, is substantial and material part of the thing patented by the said letters patent; and the said defendants aver, that the said part of the thing patented was before known, and was a part of an electro-magnetic telegraph, for which the said Samuel F. B. Morse had taken out and received letters patent from the United States of America, on the 20th day of June, 1840; and this they are ready to verify; wherefore they pray judgment, &c.

15. And for a further plea, as to the said second count, the said defendants say, that the said plaintiff his action ought not to have or maintain, because they say that the said letters patent, in said count mentioned, are the same in tenor and effect as the letters patent set forth in the above 14th plea of the said defendants, and to which, as therein copied and set forth, reference is had as part of this plea; and the said defendants further say, that the mode of combining two or more circuits of electricity or galvanism, mentioned and described in the specification annexed to the said letters patent as an improvement, is a substantial and material part of the thing patented by the said letters patent in the said count mentioned; and the said defendants aver that, in electro-magnetic telegraphs before known, modes of combining on the same principle as that mentioned and described in the said specification annexed to the said letters patent, two or more circuits of electricity or galvanism existed, and formed part thereof, to wit, in one patented to the said Samuel F. B. Morse, on the 20th day of June, A. D. 1840, by the United States of America, and in one patented to Edward Davy, of London, in England, on the 4th day of July, 1838, by the Queen of Great Britain and Ireland; and the said defendants further aver, that the said specification annexed to the said letters patent, in the said count mentioned, do not specify and point out the improvement in said mode of combining two or more circuits made by the said Samuel F. B. Morse, so as to distinguish the same from the said modes before known and patented, as well to the said Samuel F. B. Morse as to the said Edward Davy; and this they are ready to verify; wherefore they pray judgment, &c.

16. To first count, and for a further plea as to said first count, the said defendants say, that the said plaintiff his action ought not to have or maintain, because they say that the said letters patent, in said count mentioned, are the same in tenor and effect as the letters patent set forth in the 8th above plea of the said defendants, and to which, as therein copied and set forth, reference is had as a part of this plea; and the said defendants further say, that "a system of signs, consisting of dots and spaces, and of dots, spaces, and horizontal lines," set forth and described in the said letters patent in the said count mentioned, is a substantial and material part of the thing patented by the said letters patent in the said count mentioned; and the said defendants aver, that the said part of the thing patented is not any art, machine, manufacture, or composition of matter, or any improvement on any art, machine, manufacture, or composition of matter; and this they are ready to verify; wherefore they pray judgment, &c.

GHOLSON & MINER,
Attorneys for defendants.

And afterwards, to wit, at the November term of said court, in the year of our Lord one thousand eight hundred and forty-eight, this cause was continued; and afterwards, to wit, at the time appointed by law for holding the July term of said court, in the year of our Lord eigh-

teen hundred and forty-nine, the marshal of said district, in conformity with the requirements of an order to that effect from the honorable John McLean, one of the judges of the said circuit court, adjourned said court to the fifteenth day of October then next ensuing; whereupon, by reason of such adjournment, this cause was continued; and afterwards, to wit, on the twenty-second day of October, being at the October term of said court, in the year last aforesaid, "by consent of parties, it is ordered that the plaintiffs and defendants have leave to amend their respective pleadings in this case;" and afterwards, to wit, on the thirty-first day of October, in the year and at the term of said court last mentioned, came the said defendants by their attorneys, and filed in said court the following additional pleas in this cause, in the words and figures following, to wit:

17. And the said defendants, for further plea as to the said first count, say, that the said plaintiff his action aforesaid ought not to have or maintain, because they say that the said letters patent in said count mentioned are the same in tenor and effect as the letters patent set forth in the 8th above plea of said defendants, and to which, as therein copied and set forth, refe*f*erence is had as part of this plea; and the said defendants further say, that the "use of the motive power of the electro-galvanic current, however developed, for marking or imprinting intelligible characters, signs, or letters at any distance," is a substantial and material part of the thing patented by said letters patent in said count mentioned, and separately and distinctly claimed in the specifications annexed to said letters patent. And the said defendants aver, that the said Samuel F. B. Morse was not the original and first inventor or discoverer of the "motive power of the electro-galvanic current," or of the use of such power to produce mechanical results at any distance; but that such power, and the use of the same for such purpose, was before known, to wit, to one Dr. Steinheil, of Münich, in the kingdom of Bavaria; to one Joseph Henry, of Washington city, in the District of Columbia, and divers others; and such power was before used to produce mechanical results, at a distance, to wit, by Dr. Steinheil, at Münich, in the kindom of Bavaria; by Joseph Henry, at Princeton, in the State of New Jersey, and by divers others; and this they are ready to verify; wherefore they pray judgment, etc.

18. And the said defendants for a further plea to said first count say, that the said plaintiff his action ought not to have or maintain, because they say that the said letters patent in said count mentioned are the same in tenor and effect as the said letters patent set forth in the 8th above plea of said defendants, and to which, as therein copied and set forth, reference is had as part of this plea; and the said defendants further say, that "the use of the motive power of the electro-galvanic current, however developed, for marking and printing intelligible characters, signs, or letters, at any distances," is a substantial or material part of the thing patented by the said letters patent in said count mentioned, and separately and distinctly claimed in the specifications annexed to the said letters patent; and the said defendants aver, that the

said part of the thing so patented and claimed is not any art, machine, manufacture, or composition of matter, or any improvement on any art, machine, manufacture, or composition of matter; and this they are ready to verify; wherefore they pray judgment, etc.

And thereupon, to wit, on the said thirty-first day of October, in the year and at the term of said court last mentioned, came the said plaintiff, by his attorneys, and filed in said court his replications and demurrers to the foregoing pleas of the defendants, in the words and figures following, to wit:

CIRCUIT COURT OF THE UNITED STATES,
District of Ohio.

FRANCIS O. J. SMITH
vs.
HEMAN B. ELY et al.

1. And the said plaintiff, as to the said first plea of said defendants pleaded in bar, in which said defendants put themselves upon the country, doth the like.

2. And the said plaintiff, as to the plea of the said defendants secondly pleaded in bar, says, that he ought not to be barred of his action aforesaid, because he says that he, the said plaintiff, did not, on the thirteenth day of June, 1845, as in said plea averred, nor at any other time whatsoever, agree with the said defendant, Henry O'Reilly, among other things, that in consideration that he, the said O'Reilly, and those whom he might associate with him, would raise the necessary capital to construct a line of telegraph between the said towns of Wheeling and Cincinnati, in the declaration mentioned, that on said line, when constructed, the said O'Reilly, and those associated with him, and the said plaintiff, together with Samuel F. B. Morse, Aaron Vail, and Leonard D. Gale, might and use the said inventions and improvements in the declaration mentioned for their mutual benefit and profit; nor were said inventions and improvements in the declaration mentioned used on said line or route under such agreement as in said plea alleged; and this the plaintiff prays may be inquired of by the country.

3. And the said plaintiff, as to the plea of the said defendants thirdly pleaded in bar, says, that he ought not to be barred of his action aforesaid, because he says that he, the said plaintiff, did not, on the thirteenth day of June, A. D. 1845, as in said plea averred, nor at any other time whatsoever, together with the said Samuel F. B. Morse, Leonard D. Gale, and Aaron Vail, agree with the said defendants, that in consideration that they, the said defendants, would construct a line of telegraph from the town of Wheeling to the city of Cincinnati, at their own costs and charges, on the said line so constructed the said invention and improvement in the declaration mentioned might and should be used for the benefit and profit, as well of the said plaintiff, Morse, Gale, and Vail, their representatives or assigns, owning the said

right, as of the said defendants; nor were said invention and improvement in the declaration mentioned used thereon under such agreement as in said plea alleged; and this the plaintiff prays may be inquired of by the country.

4. And the said plaintiff, as to the plea of the said defendant fourthly pleaded in bar, says, that he ought not to be barred of his action aforesaid, because he says that the said defendants did not use the said machine in said count mentioned upon and over the said route, from the said town of Wheeling to the said town of Cincinnati, and between said towns, by the leave and license of the said plaintiff to the said defendant first given and granted, either on the first day of June, 1847, as in said plea stated, or at any other time whatsoever; and this the said plaintiff prays may be inquired of by the country.

5. And the said plaintiff, as to the plea of the said defendants fifthly pleaded in bar, says, that he ought not to be barred of his action aforesaid, because he says that the said specification annexed to, and making part of said letters patent, with the drawings thereto annexed, does contain a written description of the said invention or discovery, and of the manner or process of making, constructing, and using the same, in such full, clear, and exact terms as to enable any person skilled in the art or science to which it appertains, or with which it is most nearly connected, to make, construct, and use the same; and this the plaintiff prays may be inquired of by the country.

6. And the said plaintiff, as to the said plea of the said defendants sixthly pleaded in bar, says, that the said sixth plea of the said defendants, in manner and form as pleaded, and the matters therein contained, are not sufficient in law to bar the said plaintiff of his action aforesaid against them, and that he is not bound by law to answer the same; and this he is ready to verify; whereupon he prays judgment, and his damages aforesaid, to be assessed to him.

7. And the said plaintiff, as to the said plea of the said defendants seventhly pleaded in bar, says, that the said seventh plea of the said defendants, in manner and form as pleaded, and the matters therein contained, are not sufficient in law to bar the said plaintiff of his action aforesaid against them, and that he is not bound by law to answer the same; and this he is ready to verify; whereupon he prays judgment, and his damages aforesaid, to be assessed to him.

8. And the said plaintiff, as to the said plea of the said defendants eighthly pleaded in bar, says, that the said eighth plea of the said defendants, in manner and form as pleaded, and the matters therein contained, are not sufficient in law to bar the said plaintiff of his action aforesaid against them, and that he is not bound by law to answer the same; and this he is ready to verify; whereupon he prays judgment, and his damages aforesaid, to be assessed to him.

9. And the said plaintiff, as to the said plea of the said defendants ninthly pleaded in bar, says, that the said ninth plea of the said defendants, in manner and form as pleaded, and the matters therein contained, are not sufficient in law to bar the said plaintiff of his action

aforesaid against them; and that he is not bound by law to answer the same; and *this they are* ready to verify; whereupon he prays judgment, and his damages aforesaid, to be assessed to him.

10. And the said plaintiff, as to the said plea of the said defendants tenthly pleaded in bar, says, that he ought not to be barred of his action aforesaid, because he says that the said defendants did not use the said improvement in the said second count mentioned, upon and over said route, from said town of Wheeling to said town of Cincinnati, and between said towns, by the leave and license of said plaintiff to the said defendants for that purpose first given, either on the 1st day of June, 1847, or at any other time whatsoever; and this he prays may be inquired of by the country.

11. And the said plaintiff, as to the said eleventh plea of the said defendants pleaded in bar, says, that said eleventh plea of the said defendants, in manner and form as pleaded, and the matters therein contained, are not sufficient in law to bar the plaintiff of his action aforesaid against them, and that he is not bound by law to answer the same; and this he is ready to verify; whereupon he prays judgment, and his damages aforesaid, to be assessed to him.

12. And the said plaintiff, as to the said twelfth plea of the said defendant pleaded in bar, says, that said twelfth plea of the said defendants, in manner and form as pleaded, and the matters therein contained, are not sufficient in law to bar the plaintiff of his action aforesaid against them, and that he is not bound by law to answer the same; and this he is ready to verify; whereupon he prays judgment, and his damages aforesaid, to be assessed to him.

13. And the said plaintiff, as to the said thirteenth plea of the said defendants pleaded in bar, says, that the said thirteenth plea of the said defendants, in manner and form as pleaded, and the matters therein contained, are not sufficient in law to bar the plaintiff of his action aforesaid against them, and that he is not bound by law to answer the same; and this he is ready to verify; whereupon he prays judgment, and his damages aforesaid to be assessed to him.

14. And the said plaintiff, as to the said fourteenth plea of the said defendants pleaded in bar, says, that the said fourteenth plea of the said defendants, in manner and form as pleaded, and the matters therein contained, are not sufficient in law to bar the plaintiff of his action aforesaid against them, and that he is not bound by law to answer the same; and this he is ready to verify; whereupon he prays judgment, and his damages aforesaid, to be assessed to him.

15. And the said plaintiff, as to the said fifteenth plea of the said defendants pleaded in bar, says, that the said fifteenth plea of the said defendants, in manner and form as pleaded, and the matters therein contained, are not sufficient in law to bar the plaintiff of his action aforesaid against them, and that he is not bound by law to answer the same; and this he is ready to verify; whereupon he prays judgment, and his damages aforesaid, to be assessed to him.

16. And the said plaintiff, as to the said sixteenth plea of the said

defendants pleaded in bar, says, that the said sixteenth [plea] of the said defendants, and the matters therein contained, are not sufficient in law to bar the plaintiff of his action aforesaid against them, and that he is not bound by law to answer the same; and this he is ready to verify; whereupon he prays judgment, and his damages aforesaid, to be assessed to him.

SWAN & ANDREWS,
Atty's for plaintiff.

17. And the said plaintiff, as to the said seventeenth plea of the said defendants pleaded in bar, says, the said seventeenth plea of the said defendants, in manner and form as pleaded, and the matters therein contained, are not sufficient in law to bar the plaintiff of his action aforesaid against them, and that he is not bound by law to answer the same; and this he is ready to verify; whereupon he prays judgment, and his damages aforesaid, to be assessed to him.

18. And the said plaintiff, as to the said eighteenth plea of the said defendants pleaded in bar, says, that the said eighteenth plea of the said defendants, in manner and form as pleaded, and the matters therein contained, are not sufficient in law to bar the plaintiff of his action aforesaid against them, and that he is not bound by law to answer the same; and this he is ready to verify; whereupon he prays judgment, and his damages aforesaid, to be assessed to him.

By SWAN & ANDREWS,
His attorneys.

And thereupon, at said October term of said court last mentioned, this cause was continued; and afterwards, to wit, on the twenty-ninth day of November, being at the November term of said court, in the year last aforesaid, this cause was continued for re-argument on demurrer.

And afterwards, to wit, at the time appointed by law for holding the July term of said court, in the year of our Lord one thousand eight hundred and fifty, the marshal of said district, in conformity with the requirements of an order to that effect from the honorable John McLean, one of the judges of the said circuit court, adjourned said court to the thirtieth day of September then next ensuing; whereupon, by reason of such adjournment, this cause was continued. And afterwards, to wit, at the September term of said court, in the year last aforesaid, this cause was continued.

And afterwards, to wit, on the twenty-third day of October, being at the October term of said court, in the year last aforesaid, on motion of the defendants, leave is given to amend their pleas filed in this cause, by including and setting out the patents referred to therein, or such parts thereof as they deem material, and that the clerk mark the amended pleas as filed of this date; and on motion of plaintiffs, leave is given to amend the declaration, and the same is amended accordingly."

And afterwards, to wit, on the twenty-third day of October, being in the year and at the time of said court last mentioned, "this cause came on to be heard at the present term upon the demurrers filed by the plaintiff to the sixth, seventh, eighth, ninth, eleventh, twelfth, thirteenth, fourteenth, fifteenth, sixteenth, seventeenth, and eighteenth special pleas of the defendants. And thereupon the arguments of counsel being heard, and due deliberation being had, the opinion of the judges of said court were divided as to the following questions, to wit:

I. Upon the demurrer to the sixth and seventh pleas, respectively, whether the said letters patent to the said Morse are void, for the reason that the same do not on their face respectively express that they are to run for fourteen years from the date of the patent issued to said Morse in the kingdom of France.

II. Whether upon the demurrer to the eighth, ninth, and eighteenth pleas, said letters patent to said Morse assume, as to the matter alleged in said eighteenth plea, to patent a principle, or a thing which is not an art, machine, manufacture, or composition of matter, or any improvement on any art, machine, manufacture, or composition of matter; and if so, whether, and to what extent, said letters patent, or any part thereof, are void in consequence thereof; and also whether said pleas are bad, respectively, for the reason that they assume to answer certain material and substantial parts of the plaintiff's claim, without averring that there are no other material and substantial parts embraced in his claim, which can be distinguished from the other parts averred to be so claimed without right, and on which he would be entitled to recover.

III. Whether upon the demurrers to the fourteenth and fifteenth pleas said patent, issued April 11th, 1846, and re-issued June 13, 1848, is void; and if so, to what extent; for the reason that it embraces as a material and substantial part thereof, a material and substantial part of a former patent issued to said Morse.

IV. Whether upon the demurrers to the eighth, ninth, fourteenth, and fifteenth pleas, said letters patent issued to said Morse are void, for the reason, as averred in said pleas, that he was not the original and first inventor of the several matters in said pleas respectively set forth; but the same had been, prior to said invention by said Morse, known and used in a foreign country."

And now, at this day, to wit, on the twenty-fourth day of October, in the year and at the term of said court first herein mentioned, "it is now here ordered, that said questions in relation to which the opinions of the judges are opposed as aforesaid, be certified for decision to the next term of the Supreme Court of the United States, according to the act of Congress in such case made and provided."

UNITED STATES OF AMERICA,
District of Ohio, ss:

I, William Miner, clerk of the circuit court of the United States, for